

REMARKS

There are now pending in this application claims 1 to 9 and 12 to 16, of which claims 1, 15 and 16 are independent. Claim 16 is newly added. No claims have been cancelled.

In view of the above amendments and the following remarks, favorable reconsideration and allowance of the above application is respectfully sought.

The invention as set forth in independent claim 1 now recites a sheet material information-acquiring apparatus which comprises a sheet feeding unit for feeding an anisotropic sheet material, a correcting unit for correcting the position of the fed sheet material to bring the orientation direction to be in a prescribed direction relative to the feed direction of the sheet material, an external force applying unit for applying an external force of the sheet material in the corrected position wherein the applied external force is a mechanical force, and an information-acquiring unit for acquiring information for changing a printing mode based on the stress caused by the external force applied to the sheet material.

Independent claim 15 was directed to a process for acquiring information on an anisotropic sheet material which comprises the steps of correcting the position of the fed material to bring the orientation direction of the sheet material to be in a prescribed direction relative to the feed direction of the sheet material, applying a mechanical external force to the sheet material in the corrected position and acquiring information on the stress caused by the applied external force in the sheet material.

Each of claims 1 and 15 was rejected under 35 U.S.C. § 102(b) as being anticipated by Tomita, et al. (U.S. Patent No. 5,852,499). In view of the above amendments and the following remarks, those rejections are respectfully traversed.

As set forth previously, Tomita, et al. is directed to an image forming apparatus which includes a device for optically detecting the orientation of a paper sheet. Tomita, et al., provides for a device for removing an image forming substance such as toner or ink from paper or a similar an image holding member and which senses the orientation of fibers constituting the sheet material. More specifically, the technique disclosed therein is directed to application of an instabilizing liquid such as an aqueous solution of surfactant of the sheet material so as to vary a condition for applying the unstabilizing liquid to paper and a condition for drying paper. In Tomita, et al., the direction of the sheet has been previously detected, and is followed by adjusting the direction of the sheet material, and this is done to address a technical problem of deterioration of the property of removing the image forming material when applying the instabilizing liquid depends on the direction of making the sheet. Tomita, et al. discloses making a luminous flux incident on the paper from the oblique direction, followed by measuring the distribution of the resulting diffused reflection to determine the direction of paper making.

In the present invention, the position of the sheet material is corrected so as to bring the orientation direction of the sheet material to be in a prescribed direction relative to the feed direction and this is followed by applying a mechanical force to the sheet material to acquire information for changing the print mode. Changing the print modes also means adjusting numerous image forming conditions such as pressure given to the feed roller, stoppage of feed of a recording medium, a generation of an alarm signal, and so forth. (See, the present specification at page 29, line 25 through page 30, line 5). The information used for changing the print mode includes items such as densities, thicknesses, surface roughnesses, state changes, and printed states of the sheet materials, as well as occurrences of overlapping sheet feeding, and so on(see,

the current specification, page 13, lines 9-16).

Accordingly, the present invention is in direct contrast to that of Tomita, et al. In Tomita, et al., the objective is to provide an apparatus capable of determining the fiber orientation of an image holding medium, setting up a preselected relation between the fiber orientation and the direction of medium transport on the basis of the fiber orientation and thereby varying a liquid applying condition and drying condition on the basis of the fiber orientation, thus ensuring the expected removal of an image forming substance without lowering a processing speed and while freeing the medium from creasing and tearing and from defective image transfer.

The disclosure of Tomita, et al. does not contain a teaching of the correction of the position of the fed sheet or to the application of an external mechanical force to the sheet material while in the corrected position to acquire information for changing the printing mode in response to the stress caused by the applied external mechanical force. Moreover, Tomita, et al. does not include or disclose a means for correcting the oblique advance of the sheet material, as called for by the present claimed invention.

The Examiner cites portion 11 and Figure 9 of Tomita, et al. as corresponding to the correction of the oblique advance of the sheet material. Applicants respectfully disagree. Portion 11 and Figure 9 is a paper rotating unit which serves as a means for transferring a paper 5 to a unit 10 for sensing a fiber orientation of the paper and rotating the paper so as to turn the paper 90° to the transferring direction as occasion demand. It does not include means for correcting the oblique advance of the sheet material.

For the foregoing reasons, Applicants respectfully submit that Tomita, et al. does not disclose or suggest the invention as recited in either of claims 1 or 15, or as recited in

new claim 16.

Applicants respectfully submit that each of the independent claims is patentable over the applied art of record. The remaining claims in the above application are dependent claims which depend either directly or indirectly from one of the above-discussed independent claims and are therefore patentable over the art of record for reasons noted above with respect to the independent claims. In addition, each recite features of the invention still further distinguishing it from the applied art. Favorable and independent consideration thereof is respectfully sought.

Applicants respectfully submit that all outstanding matters in the above application have been addressed and that this application is in condition for allowance. Favorable reconsideration and early passage to issue of the above application is respectfully sought.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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